COTTON - IMPROVED SEED AND VARIETIES

Excerpts from 1924 Annual Reports of
State and County Extension Agents

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Alabama

The Alabama Experiment Station shows that there is often a difference of over 100 pounds of lint cotton between the yield of the highest variety and the lowest variety, even where seed of pure strains are used. Some farmers use one variety and some another and more often they use only gin-run seed. Our agents are, by variety demonstrations, making an effort to standardize varieties.

*No attempt is made to cite all references to cotton - improved seed and varieties in this circular. Only selected extracts showing typical methods employed and results obtained in a number of States are included. Owing to differences in terminology used in the various States and to other local conditions, the information herein should be reviewed by the State subject-matter specialist concerned before incorporating any part of it in the extension plans for the State.

A good illustration of such a demonstration is reported by County Agent Riddell of De Kalb county. Cook 10-10, a variety bred by our experiment station yielded an increase that was worth $9 an acre more than Half-and-Half, $18 more than Jackson's Over-the-Top and $24 an acre more than Wanamaker's Cleveland. It is also interesting to note that in Randolph county, Over-the-Top, a highly advertised variety, ranked very much lower than Cook 10-10. The value of such demonstrations lies in the fact that it is possible to lead to standardization of varieties around each ginning center. -- E. E. Binford, District Agent, Northeast District.

This has been a favorable year and almost any kind of cultivation or fertilizer did well, but the well-selected seed, properly fertilized and well cultivated showed the best results over ordinary methods that we have ever experienced. On one demonstration plot of 4-1/2 acres where well-selected seed was used with about 800 pounds of our fertilizer mixture we gathered 2,800 pounds of lint cotton. The average yield, where 200 pounds of acid, 100 pounds of soda, and 50 pounds of potash were used on demonstrations, was 1,003 pounds of seed cotton per acre. Where 400 pounds of acid, 200 pounds of soda, and 50 pounds of potash were used, the average was 1,160 pounds of seed cotton per acre. This was about 200 pounds more seed cotton per acre than the ordinary mixed goods in the same amounts produced. We shipped in 250 pounds of 307-6 Cook wilt-resistant seed, which is being used to improve the seed in this county. The farmers who bought this seed were to save what they grew and distribute it at a reasonable price to their neighbors, which they are doing liberally. We hope to standardize this cotton in this county.

One demonstrator used a long staple variety with the result that the premium in price was not enough to offset his low yield, and he is going back to our regular seven-eighths cotton which we all grow. Our farmers are very enthusiastic about growing cotton since the coming of the Alabama Farm Bureau Cotton Association, and exactly four times as many are marketing their cotton through that organization as did last year. One demonstrator is making good, selecting his cotton and developing a good wilt-resistant strain, which he is selling now. --J. H. Witherington, County Agent, Houston County.

We did not get as good results with the thick spacing as I had hoped owing to the fact that the unfavorable weather in the spring prevented us from getting perfect stands. However, we have proof that thick spacing pays on most of the projects. No variety tests were carried on; the boys used only the Cook 10-10. This variety is producing exceedingly well so that a number of the farmers in the county are going to plant their entire crop in this Cook cotton. --F. A. Rew, County Agent, Pickens County.

California

Several carloads of Imperial Valley cotton enthusiasts went up to Riverside to attend a state-wide meeting of men interested in the growing, handling, and marketing of cotton. A state-wide organization, known as the California Cotton Association was perfected. The purpose of the organization is to effect legislation making it possible to grow only one variety of cotton in a community, county or section, and to establish and maintain effective quarantine, and the like.

A Campaign to Establish One Variety. - On December 13, the executive committee of the cotton growers' department met and adopted the following program:

(1) A campaign to influence all cotton growers in Imperial Valley to grow only Acala cotton in 1924, and maintain only Acala.

(2) A campaign to establish and maintain a cotton grading, classing, and marketing service for 1924.

(3) Determination of the advisability of volunteering cotton.

(4) Importation of adequate supply of cotton pickers and establishment of a uniform scale of prices to be paid for picking cotton.

On December 22, a subcommittee of the cotton department met with a number of bankers of Imperial Valley and influential Los Angeles and San Diego and presented to them the idea of a one-variety cotton community. The bankers enthusiastically agreed to support the campaign in every manner possible. On January 2, a meeting was held with the newspaper editors of the valley and their promise to support the campaign was obtained. Special cotton meetings were held in all farm centers where cotton growing is an important part of the agriculture of thatsection. Three cotton growers' mass meetings were held in different parts of the valley, which were attended by approximately 75 per cent of the cotton growers of the valley.

In order to enable growers to procure pure Acala seed, the executive committee of the cotton department requested the farm bureau directors to allow the farm bureau manager to bring in pure cottonseed in car lots for the benefit of the growers. Over 6 carloads were brought in and distributed to growers. Several more carloads could have been used bu the supply was exhausted.

As a result of this campaign, between 20,000 and 30,000 acres were planted to Acala cotton in Imperial Valley this year.

Eight farmers who intended to grow other varieties of cotton than Acala were obtained as cooperators to plant some Acal alongside their other cotton and procure comparative results.

Observations were made on all the plots on September 29 and 30, in company with H. G. McKeever, cotton breeder of the Bureau of Plant Industry, and on October 29 and 30 with J. A. Evans, Assistant Chief and Cotton Specialist of the Office of Extension Work, both of the U.S. Department of Agriculture. The general observations were that:

(1) The Mebane and Lone Star cottons appeared to have a somewhat larger crop of the open bolls than the Acala.

(2) The Mebane and Lone Star cottons appeared to have a larger percentage of big bolls than the Acala cotton.

(3) The Acala cotton had bolls that were just as large as any on the Mebane or Lone Star plants.

(4) The Acala had a much better top crop of bolls.

(5) The fiber of the Acala was longer and of better quality than that of the Mebane and Lone Star.

(6) All the cotton, no matter what the variety, looked very poor, due to serious water shortage in August and September and due to damage by cotton leaf perforator in July and August.

Final picking has not been made on any of the plots.

As a whole, growers over the Valley are very much disappointed with Acala cotton, most of them stating that Mebane and Lone Star are preferable.

As a part of their program of work, the cotton growers department of the farm bureau decided to organize and operate an exchange. The farm bureau manager did considerable work in attempting to get this organized but the plan fell through. -- E.L. Garthwaite, County Agent, Imperial County.

About 15,000 acres were planted to cotton in 1924 as against 6,500 in 1923. The extension service has cooperated with the U. S. Experiment Farm in advocating a one-variety area. This year there is practically no cotton in San Joaquin Valley except Acala. Pure seed plots have been grown in various parts of the county and sufficient improved seed is available for all planting next year. -- Laurence W. Taylor, Acting County Agent, Kern County.

Kentucky

This is Calloway's first cotton crop. There were about 1,000 acres planted to cotton, but on account of the late wet season, only about half of the acreage stood. The Early King and Improved Half-and-Half are the two varieties principally grown.

Some good yields have resulted in a general optimistic feeling for cotton to be grown on a large scale in the future. This year's work is to be completed with mimeographed summaries of variety and fertilizer tests placed in the agent's hands and proper newspaper publicity given to the results. -- Ralph Kenney, College of Agriculture, University of Kentucky.

In connection with diversification and with a view to adding another money crop, I assisted materially in the development of a cotton acreage in my district and a total of 3,700 acres were planted. All bought pure seed, Acala, which came from an area uninfected by boll weevil. This seed was distributed to the farmers in six counties with the following understanding:

(1) That they would not plant more than two acres to each available picker on their farms.

(2) That the acreage would come off their intended tobacco acreage.

(3) That it be planted on land of medium fertility, in ridges and three or four plants to every 8 inches.

(4) That it be fertilized with 250 pounds of acid phosphate and 100 pounds of nitrate of soda placed in the ridge directly under the cotton seed. -- C. A. Mahan, County Agent Leader.

The varieties tested with Acala, Trice, Express, Cleveland, and Half-and-Half. The demonstrations showed that of these varieties, Express and Trice were best suited to this section. --Harry R. Cottrell, County Agent, Marshall County.

Louisiana

Realizing that the object in cotton production is a high money value per acre, rather than per pound of lint, Dr. Craighead with other farmers of this section, chose Half-and-Half as the variety of cotton for his farm. He obtained the best seed on the market by purchasing direct from Summerous, the

originator of this variety. The rapid early fruiting quality of the cotton makes it one of the leading varieties in the yield of seed cotton per acre, under boll weevil conditions. Coupled with the high yields is the fact that this cotton gins from 45 to 46 per cent lint, and has a staple of 7/8 inch when grown under proper conditions.

Not satisfied with mass selection of seed, Dr. Craighead is doing sone outstanding plant-to-the-row selection, for the purpose of obtaining results and seed from the offspring of ideal stalks. The seed obtained and planted on this farm is kept pure and is not the "gin mixture" so commonly found on the average cotton plantation.

In addition to Half-and-Half cotton, some wilt-resistant cotton is being produced on this farm to meet a local demand for seed of wilt-resistant varieties. The varieties grown are the Wilkinson-Toole, obtained from Headland, Ala., and the Alex wilt-resistant, which was originated by the Louisiana Experiment Station at Baton Rouge. --C.W. Davis, County Agent, Claiborne Parish.

We ran no regular experimental test on varieties this year but we did have one on a large scale. One of our most successful cotton planters who has planted the shortest staple he could get was induced to try a little Delfos, which resulted in his planting 250 acres to that variety. He will plant nothing but Delfos next year. --C. P. Seab, County Agent, Concordia Parish.

Mississippi

In maintaining pure seed, we have for several year interested farmers in obtaining seed from the experiment station and using every precaution to keep the seed pure. We now have 11 or 12 farmers in the county who carefully handle their seed to keep it clean and pure, and this seed is as good of that strain as can be obtained anywhere. It has proved very remunerative to these men. Some of the men are now members of the Pure Seed Association formed of Delta planters in various counties. By this method strains can be obtained which we believe assure us of pure seed from a recognized source.

We believe this work with cotton is getting results in that we have as much pure seed planted in this county as any section and we are on the right track toward getting better production per acre. A considerable acreage will be farmed this way in 1925. This method was followed with each of the club boys. -- C. C. Smith, County Agent, Bolivar County.

The fertilizer tests and variety tests with cotton created considerable interest in all parts of the county. In the variety test, Mr. John W. Smith had seven of the leading varieties in his demonstration. This test attracted the people from all parts of the county and many groups of farmers made visits to inspect the demonstration. This one project will influence at least 100 farmers to plant improved varieties of cotton next year. Mr. Stanley had an outstanding demonstration in a fertilizer test with cotton. The yield was doubled as compared with the general crop on his farm. Other tests were made with corresponding results. The spacing demonstrations were effective in showing the value of this method as compared with the general practice over the county. --F. M. Smith, County Agent, Wayne County.

New Mexico

The principal work in 1924 has been toward standardization and attempts were made to acquaint the farmer with the better varieties only, in order that he may not develop a seed mixture with this net crop as he has done with other older crops in all sections where planted. The first seed planted was reasonably pure. The quarantine with the newness of the crop has also assisted materially in maintaining the quality of the product. Some cotton was grown as far north as Albuquerque in the Rio Grande Valley, and considerable acreage was planted in southern Harding and Union and northern Quay Counties. In the latter county, there are two gins. Variety demonstrations were run in eight counties with some success. Most of them indicate that the results will depend more on the improvement of the variety or strain than by selecting new varieties. although on the dry farms an earlier cotton is needed. This work will be continued.

Arrangements have been made with President Kent and Director Garcia of the experiment station by which a large acreage of pure Acala cotton will be planted near the college farm this year. This cotton will be isolated so that it will not become mixed with other varieties, and the fields will be rogued during the summer to eliminate all undesirable types of plants. Mr. McNamara has already made selections from plants taken from the pure Acala plots grown last year. These plants were examined as to length, quality, and percentage of lint, so that by planting these selections in an isolated plot, an excellent strain of cotton will result.

The pure Acala seed produced on these breeding plots will be increased by community cotton associations which are in the best position to grow and gin the seed so as to keep it pure. Two communities have already accepted this plan of cotton improvement and will take a certain amount of the pure seed and elect members of their association to grow and gin this seed under conditions specified by the college. The second year the seed raised on the selected fields will be divided among the members of the association, and by three or four years there should be sufficient amounts of this pure seed available so that the whole valley will be growing the one strain of high-class Acala cotton.

In order to protect the growers of this high-class cotton from the few who might wish to grow some other kind, it is proposed to get the cooperation of the gins so that they will gin only this one variety. Acala cotton is the variety selected in the Mesilla Valley because experiments have shown it to give excellent results, and 90 per cent of the growers in Dona Ana county prefer this variety.

President Kent has been very much interested in the work since the cotton was planted and to him and the county agent, R. C. Stockdale, belongs most of the credit for its success in 1924. --Georgie R. Quesenberry, Agronomist.

Quarantine - Regulations of Importation of Cotton Seed. - The 1923 crop of cotton was of a poor quality and germination. As some of the cotton had made a very good yield, there was a large increase in the contemplated acreage to be planted in 1924. This brought up the question of the source of supply of seed that would be required to take care of the demand.

The quarantine regulations at first prohibited shipping seed in from any place outside the State. Later these regulations were changed so that seed could be brought in under a permit from the Federal Horticultural Board. One car was brought in at first and then local applications were filled out for individual needs. Between 15 and 20 permits were issued to bring in seed.

The county extension agent took every opportunity that was available to get the regulations before the public, so that everyone would be informed on just what the conditions were. This information was placed before the majority of the farmers in the county. There was a lot of objection to this regulation, and a number of truck loads of seed were brought in from different points in Texas. However, the most of the men were willing to abide by the law, even if it did work a hardship.

Sterilization of the Seed. - The law requiring all cottonseed to be sterilized has caused much trouble and inconvenience in Quay county. When the gins first started to operate in 1923 they opened without a license. This was not discovered by the Federal Horticultural Board until late in the season. No sterilizers were attached to the gin and no attempt was being made to comply with the law. As soon as an inspector was sent in, the gins had to make a sterilizer that would comply with the law. It required time to make this and get it in operation. It caused dissatisfaction among the farmers because they wanted to get the cotton ginned as the price was fluctuating. The sterilizer that was finally put in operation was not so well equipped as it should have been and did not do the best kind of work. Live steam was used in direct contact with the seed. At times the steam was little more than hot water. This soaked up the seed, and it is likely that in some instances the seed was damaged, not from overheating, but from underheating as the water soaked the seed and if it was not properly dried out it probably heated from the moisture.

President Kent was asked to come into the county and explain the gin law, its intentions, and possible benefits. Three meetings were held in the county while Mr. Kent was here. At these meetings all questions that related to the law were discussed and with two exceptions, every man present agreed that the law was what we wanted for our own protection. It was thought that a sterilizer would cost about $1,200, but the Federal Horticultural Board worked out blue prints for one that could be built for about $300. This meant quite a saving to the gin owner. The local representative has cooperated with the gin men in getting the sterilizer made and installed which has brought about a better spirit and better cooperation than existed last year. --A. L. Hamilton, County Agent, Quay County.

North Carolina

In another community, I conducted a cotton demonstration with a tenant farmer who was renting from a white man. There are 10 acres in the plot. I advised him to plant Kings Improved Strain 29 cotton on the plot, but the landlord preferred Cleveland, so we used Cleveland Big Boll, and began the work by plowing under a large crop of clover last fall, disking good and deep in the spring, using 12-3-3 fertilizer with nitrate of soda, our source of nitrogen (home mixed) applying 600 pounds per acre, cultivating thoroughly and frequently and late, the object of the demonstrations being to test variety, fertilization, and cultural methods. We measured off 10 more acres of the same grade of

soil just across the road and planted this to Kings Improved Strain 29 and treated it the same as the Cleveland Big Boll. It grew well and attracted the eye of all who saw it. One day late in October, a party of railway officials passing on their way to Asheville, N. C., were attracted by the cotton, and decided to stop on their way back to inspect the fields. The special train in which they were riding was stopped and the entire party went out to inspect the field. More than 200 men and women were in the party. The following is the report of how the demonstrations came out:

10 acres Cleveland Big Boll
seed cotton----------9,800 pounds
10 acres Kings Improved Strain 29
seed cotton----------13,400 pounds

The landlord has asked me to get him some Little King seed Strain 29 to plant next year. The whole community has been thoroughly convinced that Cleveland Big Boll is too late for our red soils, for when we were picking Cleveland the first time, Kings Improved was being picked the second time. Cleveland was also badly hurt by frost while King was not harmed at all. --J.A. Carlton, Negro County Agent, Rowan and Iredell Counties.

We conducted variety tests on three different farms in the county. Results of these variety tests are very interesting and give us some valuable information. The varieties which we have been encouraging and pushing in the county proved to be the leading varieties in yield and in money value per acre. Mexican leads with Cleveland next. Variety tests conducted in different communities do a great deal to encourage the planting of improved seed. -- J. M. Cameron, County Agent, Anson County.

As good seed should be one of the first items of importance in growing any crop, I began soon after coming here to learn the varieties which experimental station tests had shown to give best results for this section and was informed that Cleveland Big Boll and Mexican were the varieties recommended for the county. I endeavored to get a few leading farmers to plant a reasonable acreage to one of these varieties. I also found a few farmers who purchased seed of these varieties last year from reliable sources and kept it pure at the gin. In addition to getting farmers to order seed direct from plant breeders, I urged them to make use of the pure seed in the county. This fall I have assisted three farmers in field selecting seed from only the best stalks. Each farmer selected enough to plant a seed patch of 1 or more acres next year. A meeting of the county board of agriculture was held for the discussion of seed selection, which was led by S. W. Hill, Assistant Plant Breeder, and a number of farmers have already placed their orders for pedigreed Cleveland and Mexican seed. I expect to keep up the seed selection with farmers who have already started the work and induce others who will get pure seed next year to do the same thing, hoping in time to practically eliminate other varieties and scrub seed and get several good farmers to build up the reputation for growing good seed. A field selection of cotton seed demonstration was also held with the agricultural class of Kelford High School.

Variety tests were conducted with men in different parts of the county in order to get results from different sections. --B. E. Grant, County Agent, Bertie County.

The most important work done under cotton has been that of seed improvement. This work began five years ago by the introduction of a pure strain of Wanamaker-Cleveland cotton. Each year more seed is purchased from reliable breeders, and the cotton grown from the seed previously purchased is well selected and cared for and resold to neighboring farmers. At the present time, more than half the cotton planted is of the Wanamaker-Cleveland variety. The county agent bought over 500 bushels of purebred seed last year and will continue to encourage the farmers to use purebred seed, but much good can be accomplished by field selection and the growing of seed patches.- W.K. Rowell, County Agent, Chowan-County.

For the improvement of the county's cotton, 1,800 bushels of one variety, pedigreed Cleveland, was purchased direct from the breeder, and this seed was placed on 90 farms at the rate of 20 bushels per farm. The main idea was to standardize one variety and to grow sufficient seed to supply the county's demands for purebred seed for 1925 planting. Excessive rain during the month of September took heavy toll and very little seed is available with a germination that would permit its use for planting from the above attempt to supply pure seed in quantity. However, the reaction from this attempt to supply pure seed has borne good fruit, and 2,000 bushels are now contracted to replace that lost by weather conditions. -- L.B. Brandon, County Agent, Hoke County.

The work with cotton was one of my major problems, therefore special emphasis was given to the use of good seed and preparation of the soil for early planting. The county agent assisted 35 farmers in getting improved cottonseed direct from the breeders, consisting of the varieties as follows: Wanamaker-Cleveland, Big Boll, and Mexican Big Boll.

Sixteen of the above enrolled as demonstrators have followed the instructions of the county agent with the result that 300 pounds more seed cotton per acre were grown over that grown under the old method of cultivating cotton.

W. J. Harris reported that he found in the Mexican Big Boll just the kind of cotton he was looking for and that he was positive he had lost during the past two years more than $1,000 from the use of poor run-down seed and he could well afford to pay $10 a bushel for good seed in preference to the use of ordinary gin-run seed.

H. C. Meads reported that he had lost more than $1,000 in the use of ordinary seed during the past year and that he intends to use nothing but improved seed in the future. He has never used Mexican Big Boll but the Cleveland Big Boll proved satisfactory to him. He was saving from $12 to $15 per bale by having his cotton ginned. --Grover W. Falls, County Agent, Pasquotank County.

Cotton is the outstanding crop in this county and that with which our farmers are most familiar. It is the only crop which has brought any considerable prosperity to our farmers and is still king even though the county produced but 52 per cent of a normal crop this year. Cotton being the principal money crop of the county, it is necessary for the county agent to render some real service with this crop, if he is to be a real factor in the line of service to all the farmers. With this in view, I staged a campaign for better seed and for standardization of variety within the county. Eighty-five per cent of the cotton planted within the county is now Cleveland Big

Boll or derived from that variety. Our campaign for better seed and for only one variety resulted in bringing into the county 3,000 bushels of pedigreed Cleveland seed at a saving to the farmers of 94 cents per bushel. Three hundred bushels of Dixie Triumph seed were purchased for farmers who had wilt-infested land, making a total of 3,300 bushels of purebred seed delivered to 150 different farms at a saving of $3,102 by cooperative purchasing.

This seed gave almost universal satisfaction to the purchasers even though the season was unfavorable. A few of the farmers failed to get a perfect stand, but all were generally pleased. The Dixie Triumph was almost 100 per cent wilt-resistant.

Orders for more than 1,500 bushels of Cleveland pedigreed seed have been placed for next year's plantings. There is quite a demand from our farmers for better planting seed for next year, since they were not able to gather their cotton until after the seed had been damaged in the field. -- S. E. Evans, County Agent, Scotland County.

For the past five years, the cotton crop has been increasing in importance as a money crop in the county. Last year, the local markets received about 8,000 bales, which was the greatest crop in history. In 1924, there was an increase of 20 per cent in acreage planted to the crop, but adverse weather conditions caused poor stands, and some of it was abandoned or planted to other crops. This year we will not market 5,000 bales. The cotton grown in this section is a fairly good strain of the King variety. We conducted some variety tests and found that the Cleveland and Mexican Big Boll were better varieties. The big boll cotton did so much better than the other that in 1924, 75 per cent of the crop was planted with the improved seed. The replanted acreage, however, was badly mixed because of the insufficient supply of the good seed. We are facing a serious shortage of good seed for next season due to the fact that so much poor seed was used in replanting. I am asking the few farmers who did keep their seed pure, to get it in good marketable condition and sack it in bags of even weight so we can distribute it to good advantage next spring. -- J. C. Anthony, County Agent, Vance County.

Our main demonstrations of the year were those with farmers in every township of the county in the use of highly improved cottonseed. In cooperation with the field agent of the National Bank of Goldsboro, N. C., we distributed about 1,200 bushels of pedigreed seed. Nine hundred bushels of this seed came directly from the Edgecombe Seed Breeders' Association. The seed was distributed to about 110 farmers of this county, only four of whom used over 25 bushels of the seed. We have watched these crops closely and have obtained results from 76 of them. We are glad to report that this was a very profitable investment and one that pleased nearly all of the demonstrators. Some who could see the advantage at first have readily informed us of the profitable yields in comparison with the other varieties of cotton which were growing on their farms. W. B. Stevens, Goldsboro, Route 4, says, "There is 25 per cent difference in profit of pedigreed Cleveland seed over seed of the same variety but of poorer selection.

which seed sold at a premium." In a five-row series test of five strains of Cleveland Big Boll cotton conducted on the farm of Mr. J. C. Barden, Goldsboro, we found that the Edgecombe Pedigreed Cleveland seed was a close second to another strain of Pedigreed Cleveland which has not really been put on the market. This test was made to further uphold our faith in the highly selected strain of Edgecombe Cleveland. Mr. Berger of Pikeville, N. C., who bought 50 bushels of Edgecombe Cleveland reports a good 500 poundaverage bale per acre from this seed with tenant farming. They are saving this seed entirely for next year's planting. Two tenants would not agree to take this seed last spring as they thought they had the best obtainable. -- A. K. Robertson and John D. Brandon, County Agents, Wayne County.

It is said that within a radius of 30 miles of Wilson, N. C., more cotton is produced per acre than in any other section of the world. I am not furnishing statistics for this statement, but I do know that our yields have been greatly increased within the past few years.

Until a special effort was made a few years ago by the county agent, there was nothing spectacular about our production, and today we are far from our capacity, but we have many farmers who make in normal years more than 500 pounds of lint cotton per acre on large acreage. In 1923, we made 26,101 bales on 34,858 acres. This has been brought about largely by the use of good seed of high yielding varieties.

This year we have no less than 20,000 acres in improved seed consisting largely of the Wanamaker-Cleveland and Mexican Big Boll varieties. We find these two varieties give best results. -- B. T. Ferguson, County Agent, Wilson County.

Oklahoma

One variety test was as follows: Six acres each of Half-and-Half, Purebr Mebane Triumph and home raised Mebane Triumph. All this cotton has not been picked but the farmer made what he considered a careful estimate, judging from what has been picked. The two Mebanes picked the same or practically the same, but the new seed turned at gin 33 per cent, while the home raised only 30 per cent. The Mebane picked out most but the lint turnout yielded less than the other cotton which made 40 per cent lint. The estimated yields are 1-1/4 bales of the Half-and-Half and one bale of the Triumph.

One other variety test was made with Mebane and Half-and-Half with practically the same result. This last man did not belong to the association and he sold his Half-and-Half on the street at the same price as the other cotton. The first man mentioned delivered his cotton to the association, so we will watch the returns on this cotton and give results in weekly reports.

The third variety test was made by a man who, three years ago, while walking over his cotton in early fall, found a stalk of cotton that was well loaded and nearly all the bolls were open. He picked this cotton and planted it in his garden the next year. The seed from this cotton the next year produced enough seed to plant 7 acres this year. From these 7 acres, his selected seed has produced 8 bales, while his other cotton is making only a

little over 1/2 bale, on the same class of land. He sent a sample from each of these bales to the stapler of the Cotton Growers' Association at my suggestion as I wanted to know whether the staple would be good, bad, or indifferent. The letter from the stapler is given below:

"We have received the samples sent us and have examined them closely. We find that the cotton is good, hard bodied inch cotton and is of a character that is in demand by a number of the markets. If cotton similar to the sample sent in by you in staple were grown all over the State, Oklahoma would have a reputation still greater than she now has for hard bodied cotton. We do not know what the cotton you have would do on black land or clay, as we notice you planted it on sandy land. Permit us to suggest that you get others to experiment with the seed on different kinds of soil and different kinds of conditions and make a comparison of all the experiments in determining the general value of the seed you have improved." Signed, Oklahoma Cotton Growers' Association. -- Tom M. Marks, County Agent, Harmon County.

L. C. Billington of Hoyt tried two cotton varieties this year, Acala and Kings improved. This is just south of the Hoyt school and 15 rows makes an acre. He reports that there is little difference in the earliness of the varieties, both bloomed about the same time and opened about the same time. However, the Kings was picked a few days earlier the first time because of rain immediately after it was picked. The Acala would have been picked the same time but the rain made it too wet. The Kings was picked September 18 and made 10 pounds per row while the Acala was picked September 22 and made 15 pounds per row. The second picking was October 22 and made 18 pounds per row, while the Acala made 15. This makes a total of 27 pounds per row for Kings Improved and 30 pounds for Acala or 45 pounds more per acre for the Acala. At this second picking, a great deal of the Kings was on the ground and if this had been a rainy fall it would have been ruined. One can easily tell which was the last row of Kings and which the first row of Acala. A blind man could have told the difference by going across the rows and pulling a lock from a boll on each row and then stretching this lock out. The Kings would not stretch out, as the cotton man would say, it had "no drag" while the Acala had good "drag."

The Hoyt gin man buys cotton regardless of staple and this bale of Kings brought $22.50 or the top of the market for that day. However, Luther is not going to plant Kings any more. In commenting, he remarked that he believed under weevil conditions that the Kings would make more cotton because it had so many bolls that the weevil could not puncture all of them.

S. T. Lewis of Hoyt in the bottoms has 4-1/2 acres of Kings Improved and expects to get 5 bales, and from 23 acres of Rowden he expects 16 bales. His Kings is on the best land. He does not intend to plant any more, however, next year. It is useless to talk staple to him because the gin man pays as much for Kings, Half-and-Half, or any other such cotton as he does for a good staple cotton.

Tom Harkey of Hoyt makes the following report on cotton varieties: Four acres Kings Improved averaged 1,800 pounds per acre. Three acres Acala averaged 1,800 pounds per acre. Three and one-half acres Triumph 44 averaged 1,500 pounds per acre. Triumph 44 was a poor stand, and it was decided to plow it up but later allowed to stand. It is easier picked than Acala and has larger bolls. Its linting percentage is about the same as Acala and the hands like to pick it. Kings is a heavier fruiter with smaller bolls and the hands dislike to pick it. It is easily picked but it takes so many bolls to make a pound. This variety will not be planted next year.

J. R. Davidson, Route 3, Keota (Blaine Bottom) has Acala, Mebane, Rowden, and Lone Star cotton this year. No figures were obtained after he had finished picking but when he was nearly through he liked the Lone Star best. -- A.E. Cook, County Agent, Haskell County.

The varieties tested were New Boynton, Mebane, Acala, and Oklahoma 44. Common cottonseed was planted on one demonstration in comparison with Acala. Acala made 250 pounds more seed cotton per acre than the common cottonseed, and also a higher per cent of turnout. The acala has made a failure in the past and very little was planted this year. But the Acala made a good yield this year. The Mebane and New Boynton cotton demonstrations were on bottom land and made an average yield on 30 acres and 20 acres respectively of 1,600 pounds of seed cotton per acre. The Mebane was a little larger boll and easier to pick. Although not reported as a demonstration, one man planted 220 acres of high-bred Mebane and picked 200 bales of cotton. The Oklahoma 44 was not planted on as good land as the demonstrations with Mebane and New Boynton. It made 1,100 pounds of seed cotton per acre. The stalk was well loaded and looked like the best prospects for a while. More tests should be made with Oklahoma 44, Acala, and Lone Star for the coming year.

The wilt appeared in many cotton fields which lowered the yields for a few farmers. Some work must be done to enlighten the farmers on the best methods of combating the wilt disease. Rotation of crops is being recommended now, but if this does not handle the situation it will be necessary to plant wilt-resistant varieties of cotton.-- Curtis Floyd, County Agent, Johnston County.

Frank Armstrong of Guthrie grew 7 bales of cotton on 10 acres. He had pure Mebane seed, broke his land in February and planted the first of April. He harrowed his cotton just as it was coming up and as soon as two or three leaves were on it, he began chopping. After chopping he kept up cultivation, regularly every 7 or 8 days until August. Then he began picking in September and sold 7 bales. He did all the work himself, except a little of the picking which he hired done. He has found that pure seed and a small acreage well cultivated will profit more than a big acreage planted to grow like weeds. This cotton was left about 18 inches apart in 3-foot rows. -- George W. Powdrill, Negro County Agent, Logan County.

In the matter of cotton I was more successful due, of course, to the fact that it is the staple and principal crop of this section and that by planting time for this crop, I had become better acquainted. Soon after

arriving here with the aid of the banks and local seed dealers, we were able to ship in a car of purebred cottonseed, which was badly needed, due to the fact that very little good seed had been planted in this territory in the past 2 or 3 years. This car of seed was sold on a very close margin of profit to 94 farmers who were urged to buy it by the banks and the Chamber of Commerce. I believe that this car of seed has benefited the county more in the way of creating interest in better seed than any lot of seed ever sold here, as the difference in yield in some cases between this seed and run-down seed has been as high as $32 per acre in the same field which was planted the same week on identically the same land and with the same cultivation. I believe that this particular variety will be planted on a big per cent of the crops of this community next season and should it prove as profitable as this year, it will be of great value in creating interest in better seeds of other farm crops. -- Soula E. Lewis, County Agent, Murray County.

One of the most far-reaching accomplishments of the cotton growers of the county was made by Mr. Hutchison, who is a leading gin man of the county. Mr. Hutchison put in special stands at the gin in which the cotton may be ginned separately, thus keeping the seed from mixing with other varieties of cottonseed. A goodly number of farmers have taken advantage of this equipment, and Mr. Hutchison reports that the plan has been satisfactory, and several tons of home grown seed have been kept pure and can be purchased from the farmers at this time. I feel sure that within another year, these stands will run one-half of the time each week, saving much money to the farmers of the county which has heretofore had to be sent away to purchase pure seed. Recently, Dr. C. F. Dowell, Director of the Experiment Stations was in McAlester and held a conference with Colonel Keys, Warden of the State Penitentiary, who agreed to grow certified and inspected seed on the State farm to be sold to the farmers of Oklahoma. Seed oats will also be grown on the State farm to be distributed in the same manner. This will be the means of seed being produced in larger quantities than has been done heretofore by individual farmers over the different sections of the State. -- E. H. Houston, County Agent, Pittsburg County.

A variety test including the following varieties of cotton was carried out:

Acala 5	Improved Mebane
Oklahoma Triumph 44	Ferguson Triumph 406
Half-and-Half	New Boykin
Bennets	Ferguson
Lone Star	River Crest

A demonstration in spacing of cotton was also carried out. The plots of cotton were chopped out to the following stand (all were cultivated alike).

Plot 1	Not thinned	
" 2	Thinned to	6 inches
" 3	" "	9 "
" 4	" "	12 "
" 5	" "	18 "
" 6	" "	24 "
" 7	" "	30 "

Of the above plots, plot 2 produced the best yield, 1 being second, and 2294.

3 third. Two different demonstrations on different types of soil had been arranged, but one was ruined in the early season by hailstorms, therefore, only one is reported. --P. K. Norris, County Agent, Pottawatomie County.

South Carolina

A marked improvement has been made in the quality of the seed, especially of cottonseed on the market in this State. A great many more farmers are now using purebred seed for planting purposes than before. The supply of pureb seed has been greatly increased. It is difficult to estimate the value of this work, but there is no question that it has added much wealth to the State through increased yield and through improved quality of our crop.

Greenville County: Community cotton-breeding work has proved very profi able and has met with success. The use of this seed has increased the yield 25 per cent as estimated by farmers.

Greenwood County: Cotton-breeding work on farm of Higgins, Hodges, S.C. was a great success. Lint varied from 37.3 per cent to 41.4 per cent - variety Cleveland Big Boll. Made 25 bales on 18 acres and sold 200 bushels of seed. Interest in seed-breeding work is increasing rapidly in county.

Dillon County: Cotton-breeding work has been continued. Stalk to the row tests varied in yields from 1,080 to 1,217 pounds of seed cotton per acre. Seed from the seven highest yielding rows was saved for the 1925 increase plots Farmers in the community cotton-breeding work sold over 1,200 bushels for seed purposes at a premium of over $1 per bushel over oil mill prices, and did not have enough seed to supply the local demand. It has been found that Cleveland Big Boll cotton has given the highest average yields one year with another.

Lancaster County: Two demonstrations are being conducted in cottonseed breeding work with good results. The demand for this work is increasing. There were 3 cotton demonstrations on 28 acres.

Pickens County: Twelve demonstrations were conducted in the growing of pedigreed Cleveland Big Boll cotton seed with wonderful results. Some demonstrations produced from 1,800 to 2,000 pounds of seed cotton and 40 to 41 per cent lint. Much good seed is available for local use. -- J. L. Carbery, C. P. Blackwell, Agronomy Specialists.

Each year there is an increased demand for purebred cottonseed of good varieties for planting purposes. Not only is there a good local demand for these seeds, but there is a demand from other counties and other States. To supply this demand, seed-breeding work was established with a number of farmers who are now carrying it on. This has opened up a new and profitable source of revenue to the farmers, who arrange to supply seed of good quality.

The Cleveland Big Boll variety was selected because of its suitability and the fact that it is grown by a large number of our farmers, which makes it possible to keep the seed from mixing at the gins. --S. M. Byars, County Agent, Anderson County.

The men in this community have established a reputation for good seed. The past spring, the first time we offered seed for sale, we sold something over 1,200 bushels, all we had, and had to turn down a number of orders. This

seed was sold at a premium of just a little over a dollar per bushel above the oil mill prices. This fall we are already getting a number of orders on account of the bad weather, which damaged the seed, the men decided that rather than put out any seed they could not absolutely guarantee, they would not sell any this year. All have saved enough good seed for their own use, and later on may find that they can spare a little. The community as a whole is delighted with the work and is very anxious that it be continued. D. B. McInnis, the leading farmer in the community and the man who has been carrying on this work, came to me several weeks ago and told me that he was planning to move out of the community after this year, but he wanted the work to continue. So he made all arrangements for his brother to take it over. Later he came back and told me that he had decided not to leave so he would keep the work himself.

We will continue to push the growing of one variety of cotton in the county on all wilt-free land. Many farmers, after trying other varieties, have agreed with me that for all soils and seasons, Cleveland Big Boll is the best of all. -- S. W. Epps, County Agent, Dillon County.

Prof. Jas. L. Carbery, who has charge of the cotton-breeding work in the State, had breeding work with some of the best farmers in three communities The Wanamaker-Cleveland is being bred by these men, using the most approved modern methods. By special request, Prof. Carberry and I selected Over-the-Top cotton for A. F. Ruff and started him in breeding work. The results of the cotton variety test carried out by John J. Blair, farmer and ex-county agent of York County are shown in the following:

Variety of cotton	Yield per acre
Edgecombe Cleveland	861
Wanamaker Cleveland	924
Piedmont Cleveland	1,025
Mexican Big Boll	840
Cook 10-10	1,029
Lightning Express	1,053

--L. W. Johnson, County Agent, York County.

Tennessee

De Kalb County: Conference with county agent and J. A. Conger. Attended growers' meeting in three communities after cotton was planted and suggested soil-improvement program and other production work. Twenty-two growers planted 150 acres of Express which the ginner at Murfreesboro pronounced the best cotton that had come to his gin this season.

Jefferson County: Five acres of pedigreed Lightning Express number 3 and 5 acres of Tennessee Station Trice have been grown. Circular letters have been sent to about eight growers in the county.

Sanford Permenter of Bells, Crockett County, made 2,800 pounds of Acala variety on 1 acre. Sanford is now an agricultural student at the University of Tennessee. --J. C. McAmis, Agronomy Specialist.

W. W. Grubb, Dellrose, grew 1,552 pounds of lint cotton on 4 measured acres. He did this without having an especially good stand. He attributes his success to the fact that he had pure Half-and-Half cotton seed and to the use of nitrate of soda which he thinks helped carry his cotton through a dry spell. Mr. Grubb's neighbors attribute his high yield to the variety of seed used and he has sold all of his seed for planting purposes. -- C. P. Barrett, County Agent, Lincoln County.

W. B. Woolfolk of Claybrook, bought 3 bushels of Trice cottonseed from the experiment station, prepared his land well, used 100 pounds of nitrate of soda and 200 pounds of acid phosphate to the acre, planted on May 14 and made over three 500 pound bales that classed 401, or strict middling, white, and from 7/8 to 1 inch staple. Mr. Woolfolk always makes good cotton, but he states that the fertilizer has increased his yield 1/3 of a bale to the acre for him this season. -- Judd Brooks, County Agent, Madison County.

Texas

The chief money crop of the county being cotton, importance has been given to the matter of seed selection and the use of dependable varieties with the result that practically all farmers are now sold on the idea of good seed as an essential to the greatest production or yield.

Several communities have made progress toward the adoption of the plan to use only one variety of cottonseed, the success of such a plan having been demonstrated in the San Cavitt gin territory, just over in the Robertson County section, but which includes considerable territory in the northern part of Brazos County. Mr. Cavitt states that since he has adopted this plan, his cotton commands a ready sale at premium in price over the general run of cotton, and the reports from farm bureau members in this same community also substantiate the results obtained by Mr. Cavitt.

The Allen farm, John D. Rogers, proprietor, situated in the southwestern part of Brazos county, has taken up the work of cottonseed breeding along with the general farm program. The results so far obtained are entirely satisfactory; production has been increased, and the cotton is selling at better prices.

J. Seth Morring of Steele's store has recently purchased $6,000 worth of pedigreed cottonseed with a view to using one of his large Brazos bottom plantations as a seed-breeding farm. --Curtis L. Beason, County Agent, Brazos County.

In the Key and Midway communities located 10 and 13 miles southeast of Lamesa, respectively, I took up the question of standardization of one variety of cotton. I first obtained the cooperation of the ginners in each community, getting them to express their willingness to cooperate in trying to keep the variety pure after we had obtained as many of the farmers as was possible.

In the Key community the variety was selected and the seed ordered. This seed has come and has been distributed to the farmers of that community. The results obtained in the Midway community are not so favorable, it being more difficult to get the people to adopt one variety.

The work should bear fruit next fall in the production of a uniform grade and staple of cotton.

There will be at least 3,500 bales of cotton ginned in the community and with an increase in the quality of staple and the advantage of uniformity of both grade and staple, the community will reap a financial benefit of at least $10,000.

This was accomplished through cooperation. --C. T. Watson, County Agent, Dawson County.

Cotton has become one of our main money crops, and it seems that there is a tendency now, especially since the price has been good, to plant too much of the land under cultivation into wheat and cotton.

Considerable work was done last spring on the testing of cottonseed so that the farmers might know before it was too late whether their planting seed was good and also how much to plant according to the test. We tested samples for about 200 farmers and also for some of the men who had seed for sale. Public demonstrations were conducted and a large number of farmers were taught how to test their own seed and many did so. By this means, we saved the farmers a great deal of money and work because some of the samples tested only 16 per cent of germination. Only a few local samples tested as high as good seed shipped in, most of which tested about 90 to 95 per cent. However, some of this imported seed tested rather low and the farmers could be guided in their buying.

Through the cooperation of the gin men and other men who handle seed, we have imported a great deal of good planting seed and we now have distributed well over the county the leading varieties which are known to be best adapted to this country, the principal varieties being Kasch and Mebane strains. Acala was tried out rather thoroughly and found to be not so well adapted to the needs here as these two varieties. We have tried out these different varieties pretty thoroughly and allowed the farmers to form their own conclusions. -- T. S. Wilson, County Agent, Floyd County.

There were 12 variety demonstrations in 5 communities. The varieties tested were Mebane, Kasch, Bennett and Rowden which were compared on prairie lands. Mebana, Acala, Bennett, Toole, and Vandiver were compared on bottom land.

The idea back of the variety tests is to demonstrate the best all-round variety for a given community so as to get the community to settle on this variety for general planting, thereby avoiding the present problem of rapid seed deterioration by promiscuous gin mixing.

We are getting pretty well settled on the improved Mebane for the prairie section. As to the bottom lands, we have been able to demonstrate the decided superiority of varieties mentioned above over the once popular King's Improved but all these varieties do so well that the superiority of one over another, considering all points of yield, length and strength of staple, storm resistance, and ease of picking, is a very complicated proposition.

The Vandiver cotton shows up wonderfully as to yield and it has a good strong staple on bottom land, but its storm resistance is so poor that our demonstrators agree it is a rather risky variety to tie to, in view of the fact that when pickers are scarce and the weather bad, cotton is often left on the stalk until after New Year. --S. A. McMillan, County Agent, Fort Bend County.

Cotton variety tests were carried on in cooperation with the Lubbock substation. Similar tests were started on two separate farms, but only one was carried through the year. The Burnett and Mebane 804 was furnished by the experiment station. The Acala 5 was procured from a breeder in Ardmore, Okla., and the second year Mebane was grown at Plainview, the preceding year from pedigreed seed from Lockhart. The plats were picked over about the middle of October, the first picking, and the following results obtained:

Cotton variety test - first picking

Variety	Burnett	Acala	Mebane 804	Second Year Mebane
Number of acres	21	1.81	1.45	1.63
Lint per acre	199.5	110.5	71.5	45

The total yield has not yet been determined for the reason that the final picking has not been made. The cotton was planted early in May on well-prepared ground. It came up to a good stand and was well worked. -- E. W. Thomas, County Agent, Hale County.

Five adult demonstrators were enlisted with 5 acres each in four communities. Two of these demonstrators, L. F. Mock and H. S. Parnell of Lodge community, did some work with soil cover crops. The land on these two plots was plowed the 1st of March with cover crop turned under which was allowed to stand for 30 days and was then listed and harrowed and left until the 15th of May, the date of planting.

Mr. Mock planted his plot with the Mebane variety of seed, three pecks of seed to the acre, which resulted in a perfect stand. This plot was first cultivated with a slide cultivator with knives attached to loosen the soil and destroy weeds. It was then cultivated every two weeks with a one-row cultivator and sweeps attached until cultivation was complete. Mr. Mock commenced picking October 1. The first picking was completed and stored at the gin and held until the next picking the last week in October, which made a total of 820 pounds. The last picking yielded 950 pounds or a total for the entire crop of 8,970 pounds of seed cotton and 2,990 pounds of lint. Lint cotton was sold for 23 cents a pound or $687.70; the total expense for making and gathering was $144.95, which left a total profit of $517.85. E. T. Montgomery of Lodge community reports a yield of 1,010 pounds of seed cotton and 336 pounds of lint per acre on the plot of Lone Star cotton planted, making a total of 1,050 pounds of seed cotton and 1,683 pounds of lint. Value of cotton sold, $388.90; total expense of crop cultivation and picking $110.75; net profit, $277.24. The other three did not show as great profit on account of having bad stands and damage by storms.

The average increase per acre on these plots over that of the similar lands in the same communities was 358 pounds.

These demonstrations will no doubt have their results on the farmers who made note of this work, and will no doubt cause several farmers to adopt better methods of cultivation and use better seed. -- L. M. Thompson, County Agent, Hall County.

The pure cottonseed association has available about 3 cars of pure seed kept separate in the field and ginned separately from all cotton now stored for sale. These farmers had 2,000 acres of this cotton and will gin around 500 bales. The directors of this association are now having a bale picked from stalks selected under the supervision of the superintendent of the experiment station and the writer, the seed from which will be planted to multiplying blocks next year and the field selected again for distribution among members to improve the quality of the original seed. This will adapt the plant to this section and will give some real results as we are giving special emphasis to plants adapted to this section. This work is directly under the supervision of directors of the pure seed association and they assume all responsibility. We are acting simply in an advisory way and assisting in supervising the breeding. -- Report of D. F. Eaton, County Agent, Lubbock County.

For several years, we have been trying to determine by variety tests, the kind of cotton best adapted to the climatic and soil conditions of the county. These tests carried on during the past four years have practically demonstrated that the improved types of Mebane cotton will produce the most dollars in profit per acre. As a result of these variety tests about 60 per cent of the cotton grown in the county at this time is of the Kasch variety which is of Mebane origin. The Bennett variety of cotton has also proved itself quite a favorite with many of our farmers. The Half-and-Half variety and other short staple varieties have almost disappeared from the county. This county has been discriminated against by the cotton factors in the past due to the inferiority of the staple which was produced but since the extension service has been active in the county during the past eight or more years the county is producing as good a staple on the average as any of the other counties which are not going in for long staple cotton. In the Pear Valley community, in particular, in the county where these tests have been carried on, fully 90 per cent of the cotton planted this year was of the Kasch variety. We have also learned from these tests that it is not profitable under our climatic conditions to try and grow a long staple cotton or a cotton with a staple of more than 1-1/8 inches. Cottons of this type produce the most dollars of marketable cotton per acre in the county and that is the type of cotton we are encouraging our farmers to grow. It was but a few years back that many of our farmers, erroneously thought that cotton was cotton, and procured their seed where it could be bought the cheapest and most convenient. This practice is now history in the county and most of our farmers have come to know that the very best seed they can get is the cheapest in the long run. About the only way in which an oil mill could now sell the farmers cottonseed would be in the form of hulls and meal for feeding purposes and linseed oil for painting purposes.

Our cotton farmers have not only learned the gospel of better planting seed but are rapidly acquainting themselves with better cultural methods. This is evident through the general practice of the breaking of the fields during the fall. However, these same farmers have seen the light and are breaking their land just as quickly as they get their crops off the land. The estimate on the cotton crop for the county, made by the older growers about the time picking started, ran from 18,000 to 20,000 bales. -- G. E. Ehlinger, County Agent, McCulloch County.

This test was conducted on F. E. Haines' farm 4 miles north of the Canyon, on land that is typical of the plains of this section of the State. This test showed some interesting information, and the results should be of great value to farmers of this section of the State. The results of this test compare favorably with similar tests that have been run over a period of years at the Lubbock experiment station.

This test included the following varieties: 804 Mebane, Acala, Cliett (a Kasch strain), Pennant Kasch, Belton, Bennett and Burnett. The 804 Mebane and the Burnett were plains-grown seed, while the seed of the other varieties were from Central and South Texas. This demonstration was first planted May 22, but a stand was not obtained on any of the acres. The second planting was made on July 11, all varieties being planted at the rate of 1/2 bushel of seed per acre. Each variety consisted of 1 acre, planted in succession, and treated in like manner throughout the growing season. The Burnett cotton held the lead over all the other varieties continuously from the time the seed germinated, growing off more rapidly, fruiting earlier and more rapidly, and maturing from two to three weeks earlier; but we get the lesson that if late maturing varieties are to be grown with any degree of success, the seed must be planted very early, and if this county is to make cotton from late plantings, as is often the case, a medium staple, quick fruiting, and early maturing variety must be planted. The Burnett cotton made a good yield in spite of very adverse conditions, while the other varieties practically failed under the same conditions.

The following table shows in order of yield the acre production or the different varieties in terms of lint cotton: Burnett 179 pounds, Acala 82 pounds, 804 Mebane 52 pounds, Pennant Kasch 27 pounds, Cliett 17 pounds, Belton 15 pounds, Bennett 14 pounds.

Cotton production on an extensive scale was attempted in this county this year for the first time. Being inexperienced in this line of endeavor our farmers did not realize the value of well-bred seed or the value of seed with high germinating percentage. Owing to the fact that a large acreage of cotton was to be planted all over the Panhandle country and with no local supply of seed available, this became a fertile field for the sale of planting seed. Many good reliable seed dealers operated over this country, but the "bootleggers" were much in majority. This brought about a serious situation. The "bootleggers" were offering for sale any kind of seed they could pick up, regardless of the purity or the germinating percentage, and on account of the lower price in comparison with the prices of good seed, the farmers were buying it liberally.

On account of the wet and cold fall season, we suspected that the germination of all plains-grown seed and perhaps of most seed grown anywhere in west Texas would be very low. To ascertain the germinating ability of some of our local seed, we sent three samples to the Plainview Grain Exchange to be tested by the Federal grain inspector. These samples showed a germination of 26 per cent, 42 per cent, and 46 per cent, respectively. Upon receipt of this information I asked the Chamber of Commerce to purchase an electric seed germinator for use in my office, which it did, at a cost of $35. We started operation of the germinator on March 3, and tested and retested altogether more than 150 samples of cottonseed from different sections of the State and approximately 25 samples of sorghum seed. The germination of all plains-grown seed was uniformly low, running from 10 to 78 per cent, the great majority of

samples ranging from 30 to 35 per cent. Some samples from below the "Cap Rock" showed as high as 90 per cent germination, while many other samples from neighboring localities showed from 40 to 60 per cent of good seed. The samples from north, central, and south Texas gave uniformly good results ranging from 75 to 95 per cent, mostly from 85 to 95 per cent.

Based on the cotton acreage actually planted in Randall County this year, 20,000 acres, allowing 1/2 bushel of cottonseed per acre, our testing work saved the farmers of this county $10,000 on the cost of seed alone, not to mention the acreage that would have been lost had the poor quality of seed been planted, and the consequent bad effect this would have had upon an infant industry.

The Burnett has been the consistent high yielder, and its chief disadvantages are small bolls all opening at once; and a lack of storm-resistant qualities. Ordinarily, this early and quick maturity is a very much desired virtue, as it is in the case of the Burnett, but any variety of cotton should have storm-resistant qualities, as we are not always able to get it picked immediately after opening. The Mebane has shown a consistent good yield of strong fiber of full inch stable and, in addition, is storm resistant. The Acala has a smaller boll with a longer staple and consequently a later maturity In other words, the variety best adapted to our conditions must produce a good acre yield of cotton of a good strong staple a full inch in length and be drou and storm resistant. Our conditions will not warrant the production of long staple cotton on account of a short growing season and frequent shortage of moisture during the growing season. --J. W. Jennings, County Agent, Randall County.

We give here only two instances of the results of the cotton variety tests. On two adjoining farms, we induced the owners to plant 2 acres of Half-and-Half and 2 acres of Lone Star. Accurate data were kept on both demonstrations. The 2 acres planted to Lone Star made a yield of 1,563 pounds of seed cotton which ginned out a bale weighing 602 pounds. The 2 acres adjoining planted to Half-and-Half, made a yield of 1,290 pounds of seed cotton which ginned out a bale weighing 522 pounds. The Lone Star sold for 24 cents a pound, while the Half-and-Half sold for 21 cents a pound. -- J. F. Green, County Agent, San Augustine County.

Virginia

The interest in cotton growing was greatly stimulated by the splendid crop produced and price obtained in 1923. While its growth heretofore has been confined to a few counties in the southeastern section of the State, a number of other near-by counties became interested this year, and it was planned to put out a much larger acreage. However, the late wet spring prevented many farmers from putting out what they had expected. The yield was further reduced by an early frost which damaged most crops to a considerable extent. The Cro Improvement Association certified three varieties and 630 bushels of such seed were produced. It has been found that in most counties an early maturing variety is desirable. Four hundred and forty-seven demonstrations comprising 2,457 acres, giving an increased yield of 261 pounds per acre were completed. Five hundred and sixty farmers planted selected seed for the first time and 533 adopted improved practices. The following extracts are taken from agents' reports:

"The work conducted in cotton this year is very satisfactory when conditions under which this crop was grown is considered. On account of a cold, wet spring, cotton which should have been planted May 1 was not planted until June 7. I have never seen hill cotton with as much fruit formed on stalks in any section of the South. A late frost caught all that was planted late, resulting in about one-third of a crop. The Kings Improved variety was used in this experiment and as it was the first time it was grown in the county, the county agent advised from 1 to 5 acres per farm. Two hundred acres were planted and growers are well pleased with results."

"Cotton was having a big boom in this county due to the fact that in the preceding year, a man made 40 bales on 50 acres. We did not encourage the people to grow cotton but rather tried to guide and help them in obtaining good seed. Considering the unfavorable year the cotton did unusually well. We proved that cotton could be grown successfully. Results showed that an early cotton is most desirable. We had a total of 43 adult and 8 club demonstrators who grew 314 acres of cotton." -- W. P. Moore, Assistant Director.

Though Virginia is not known as a cotton State, the acreage in this crop is increasing each year. Thirty-eight demonstrations were conducted on 78 acres in eight counties. Improved seed was planted on 18 farms for the first time and 14 farms selected seed for the first time.

In Sussex County, J. R. Massenburg, Yale, Route 1, had 10 acres in cotton, yielding 900 pounds to the acre. Demonstrator John Rivers, Yale, Route had 2 acres on which the yield was 800 pounds per acre. This has not been a cotton county, but for the past two or three years the farmers have seeded more than ever and they are getting good results.

In Mecklenburg County, the local agent said, "More cotton was planted this year in our section than ever before. In the same field, 1 pound of certified Improved King yielded 2 pounds to one of an unknown variety with the same treatment." --T. B. Patterson, J. L. Charity, Negro Local District Agents.

This has been a hard year on cotton; it was too wet early in the spring for cotton to come up, then too wet during May and June to weed and thin it properly, and then too dry in August and September. Notwithstanding these handicaps three of the best fields of cotton in the county were demonstration fields, planted with certified Trice and King 29 seed. The agent is well pleased with the results of these improved varieties and so are the owners. The Trice was planted on June 5, and 400 pounds of 4-8-4 used per acre, and Mr. Paetz will make 1,000 pounds of seed cotton per acre, several competent judges have said, among them Assistant County Agent Thompson, who has had a good deal of experien with cotton. Both agents liked the opening qualities and the ease with which these varieties were picked, as well as the yields. Mr. Bollinger made 1,300 pounds seed cotton on 2 acres but about 200 pounds of late pickings were not included in these figures. From the 1,300 pounds of seed, this farmer got a bale weighing 488 pounds of a little more than 37 per cent from the King 29. The agent has used and will continue to use every effort to have the cotton growers change from other mediocre seed, in many instances, and late varieties, to these two varieties, and already these efforts are bearing some fruit, as two growers have sent in their orders for Trice and several more have talked with the agents. --N.H. Williams, Jr., County Agent, Mecklenburg County.